

4.8 PUBLIC SERVICES

This section addresses the capacity of locally provided and funded fire protection and emergency response services that would respond to emergency situations at the Project facilities. This section also reviews the ability of the solid waste disposal, water, and sewer utilities to accommodate the demands of the proposed Project for these services. The section assesses the impacts of the proposed Project and Alternatives on these services and capabilities.

The Project would not increase population in the area, and no employment increases would occur except for the temporary construction crews and thus there would be no impacts to police services or schools.

4.8.1 Environmental Setting

The Environmental Setting discusses the capacity of the Santa Barbara County Fire Department (SBCFD) and Office of Emergency Services (OES) to respond to incidents at the Project facilities. This section also describes the Applicant's fire protection, emergency response systems, and equipment at the Project facilities. This section details the capabilities available for the Project from the water, sewer, and waste handling facilities.

Public Fire Protection and Emergency Response

Public Fire Protection and Emergency Response Services

The SBCFD provides fire protection services to the Project area. The SBCFD serves an area of approximately 1,441 square miles and includes the incorporated sections of the county. The SBCFD has 16 fire stations. Five fire stations are located in the Goleta Valley and three are located within Goleta's city limits (Fire Stations 11, 12 and 14). In general, all firefighters are trained as emergency medical technicians (City of Goleta 2006).

Criteria used by the SBCFD to determine adequacy of fire protection services include population served, ratio of firefighters to population, and a five-minute response time from the fire station location.

SBCFD uses a standard of one engine company per 12,000 population, assuming three fire fighters per station. This standard represents the maximum population that can be adequately served. The Fire Station 11 currently serves a population of 19,714, which

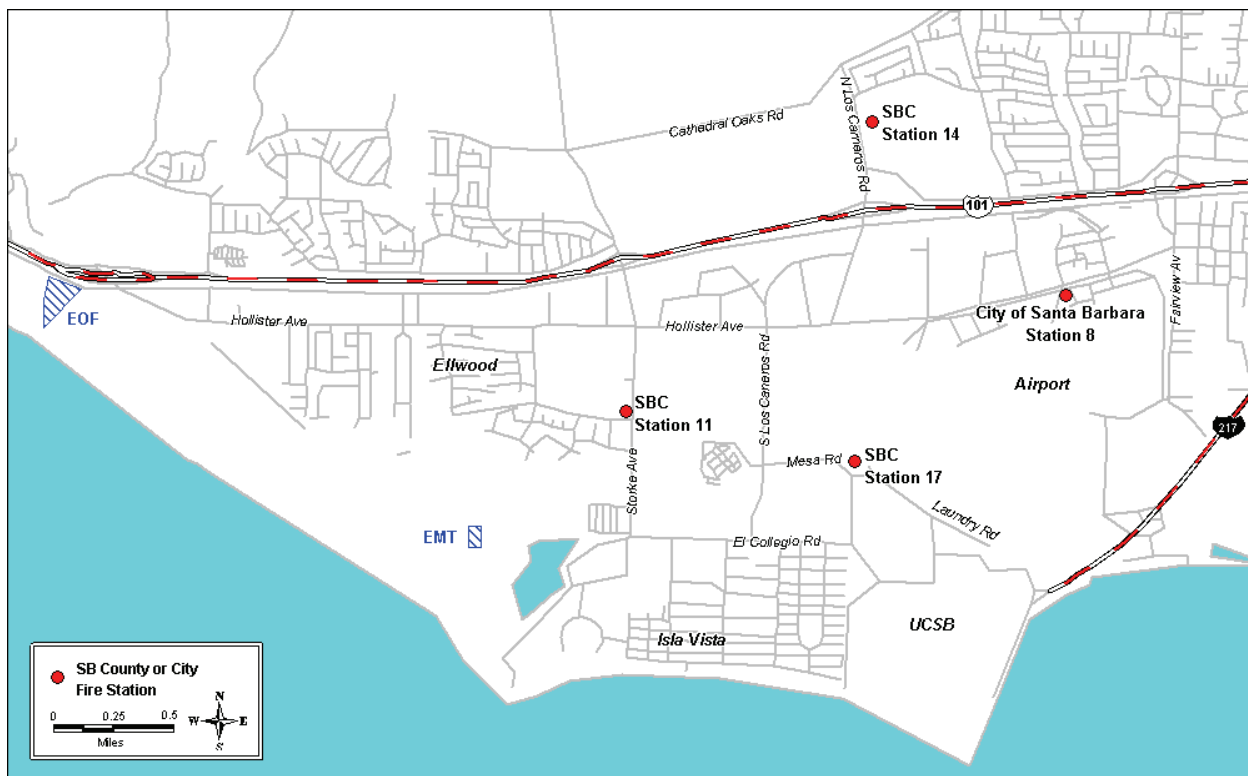
1 exceeds the SBCFC standard by almost 8,000 people. Due to the high amount of
2 commercial industrial square footage served by Engine 11, this number also swells with
3 employees and the public during the daytime.

4 The second fire protection standard is the ratio of firefighters to population served.
5 SBCFD uses a countywide level of service of one firefighter per 4,000 population as an
6 absolute maximum population which can be adequately served (City of Goleta, 2006).

7 The third measurement of fire service standards is the five-minute response time. Most
8 of Goleta falls within the five-minute response time from existing fire stations. However,
9 the western city edge (where the Applicant's facility is located) and some northern
10 neighborhoods may experience longer response times (City of Goleta 2006).

11 County Stations Number 11, 17, and 14 (refer to Figure 4.8-1 and Table 4.8-1) currently
12 provide service in the Project area (Santa Barbara County 2004).

**Figure 4.8-1
Fire Station Locations**



**Table 4.8-1
Project Area Fire Stations**

Fire Station	Miles to EOF	Miles to EMT	Address	Capabilities
No. 11, county	2.7	1.3	381 Storke Rd.	Ladder Truck 11, Engine 11. 6 firefighters: 3 on Truck 11 (for countywide emergency response) and 3 on Engine 11. Water Rescue Team.
No. 17, county	3.9	2.1	UCSB Campus Mesa Rd. Build. 574	Engine 17. 3 personnel: 1 Captain, 1 Engineer and 1 Firefighter.
No. 14, county	4.0	3.5	320 N. Los Carneros	Engine 314 and Engine 14. 3 personnel: 1 Captain, 1 Engineer and 1 Firefighter.
No. 8, city of Santa Barbara	4.2	3.5	Santa Barbara Municipal Airport 40 Hartley Place	3 Oshkosh 1500-gallon crash trucks and a light rescue vehicle. Two of the Oshkosh are modern Strikers with foam, dry chemical and Halotron capabilities. A 1982 Oshkosh T-1500 is in reserve. 3 personnel: 1 Captain and 2 Engineers.
No. 12, county	4.8	4.1	5530 Calle Real	Engine 312 and Engine 12. 3 personnel: 1 Captain, 1 Engineer and 1 Firefighter.

The SBCFD response to a fire or emergency incident at the onshore Project facilities, the EOF and the EMT, would be three engine companies, a truck company, and a Battalion Chief. The Captain of the first-on-the-scene engine would evaluate the situation and call or cancel resources depending on the size of the incident. The equipment would include the engine and truck companies from Station 11, the engine company from Station 17, and the engine company from Station 14 (Magallanes 2005).

The station closest to both the EMT and EOF is County Station 11 that is located on Storke Road approximately one mile (1.6 km) from the EMT and 2.7 miles (4.3 km) from the EOF. Station 11 maintains a 1,500 gallons per minute (5.7 cubic meters [m³] per minute) pumper unit, a truck company, and water rescue equipment. Station 11 is staffed with six firefighters who are trained as emergency medical technicians of which one is also a paramedic (Santa Barbara County 2006). Response time to both facilities is under five minutes.

County Station 17, located approximately two miles (3.2 km) from the EMT, and 3.9 miles (6.2 km) from the EOF, is the next closest fire station. Station 17 is staffed with three firefighters who are trained as emergency medical technicians. Station 17 is also the home station for the University of California, Santa Barbara (UCSB) Rescue 7, which is staffed by one paramedic and one student emergency medical technician.

UCSB Rescue 7 is not part of SBCFD. Response time to the EOF from Station 17 to the Project area is approximately five minutes, and is over five minutes for the EOF. Station 17 maintains a 1,500-gallon per minute (5.7 m³ per minute) pumper unit, a reserve truck company, and an ambulance (UCSB 2004).

County Station 14 on N. Los Carneros Road, approximately 2.5 miles (four km) from the EMT, and four miles (6.4 km) from the EOF, maintains one fire engine and is staffed with three firefighters, who are also trained as emergency medical technicians. Response time to both the EMT and EOF is approximately six minutes (Magallanes 2005).

County Station 12 is a little more than four miles (6.4 km) from the EMT. This station is equipped with one engine and is staffed by three firefighters. Station 12 would be called on a second alarm to both facilities (Magallanes 2005).

City of Santa Barbara Station 8 is located approximately 2.5 miles (4 km) from the EMT, and 4.2 miles (6.7 km) from the EOF. This station is a dedicated airport rescue station with only “crash truck” response apparatus. Station 8 cannot respond to incidents offsite, unless the Santa Barbara Airport Authority grants permission (Magallanes 2005).

The SBCFD has determined that the most under-served area in the city of Goleta is the extreme western portion, which encompasses the Project location. In conjunction with the county, Goleta will provide a two-acre site for a proposed new fire station (Station 10) to serve the western area of the city (Figure 4.9-1). The new fire station would be constructed as soon as funding becomes available (City of Goleta 2006). Goleta collects several types of Development Impact Fees to offset the additional demands generated by new development on public facilities throughout the city, one of which goes directly toward the goal of building the new fire station. Construction of the fire station would likely cost nearly \$8 million; currently the city has collected approximately \$850,000 towards that goal (SBCFD 2007). However, the proposed Project would not be subject to these fees as it is not included in the categories of projects for which such fees are assessed (e.g., single-family dwelling, dwelling other than single-family, retail commercial, and non-retail commercial).

The Office of Emergency Services was once a division of the SBCFD but currently acts under direction from the Santa Barbara County Executive Offices.

The Applicant's Fire Protection and Emergency Response Plan

In addition to the publicly provided fire protection and emergency response equipment, oil facilities are required by Federal and State regulations to have onsite fire fighting equipment, as well as materials to control oil spills or other hazardous materials releases. The Applicant has fire fighting and emergency response capabilities at the EOF, Platform Holly, and EMT in accordance with these regulations. A short summary of the equipment available at each of the facilities is given in Table 4.8-2. The Applicant's ability to prevent, contain, and extinguish fires or resolve emergencies reduces the burden placed on publicly provided and funded fire protection and emergency response services.

Table 4.8-2
Summary of Fire Protection and Emergency Response Equipment
at the Project Facilities

Facility	Equipment
Platform Holly	Fire pumps, extinguishers, hoses, fire blankets, fire foam monitors, smoke detectors, combustible gas detector, fire alarm Spill containment boom and adsorbent pads
Ellwood Onshore Facility	Extinguishers, hoses, fire foam and fire monitors, hydrants, fire blankets, smoke detectors, combustible gas detector; LEL monitors, fire alarm Spill containment boom and adsorbent pads; pressure and leak detectors on all piping, low pressure and high level alarms on gas lines, high liquid alarms on heaters, valves that close at a rate of less than 60 sec.; H ₂ S gas detectors
Ellwood Marine Terminal	Extinguishers, fire water tank, combustible gas detector
Barge <i>Jovalan</i>	750 feet boom; 6 bales of sorbent pads An emergency response assist boat stands by for oil spill response support activities during each loading operation

The Applicant has established emergency notification procedures for notifying agencies and the public if a toxic gas release with offsite effects occurs. In addition to immediate notification of all responsible agencies, neighboring properties will be notified by phone. In the event of a catastrophic release, the public within the hazard footprint will be notified by a Community Siren. Signs are posted to explain the meaning of the siren and recommended actions to take when the siren is heard.

The Applicant also maintains comprehensive procedures for responding to various emergencies such as fire, oil spill, gas release, toxic release, critical equipment failure, and others as detailed in the Applicant's Emergency Action Plan for the South Ellwood Field (Venoco 1998).

1 The Applicant's Emergency Management System

2 All emergency incidents that occur on the Applicant's property or facilities are managed
3 utilizing an Incident Command System (ICS) consistent with standard Federal and State
4 emergency command structure guidelines. This system provides the capability and
5 flexibility to respond to a wide range of emergency incidents, allows for complete
6 integration with all government agencies' emergency response organizations, and
7 ensures the proper and efficient response to all emergency incidents.

8 The Applicant's Emergency Management System is a two-tier organization consisting of
9 a corporate Sustained Incident Response Team (SIRT) and a facility-based Initial
10 Incident Response Team (IIRT). Personnel assigned specific positions in the SIRT and
11 IIRT are required to be thoroughly familiar with their roles and responsibilities, and to
12 participate in specified training programs and exercises simulating emergency events.
13 Emergency response contractors and Oil Spill Response Organizations are also
14 integrated into this emergency management system. The Applicant's Emergency
15 Management System is described in detail in the South Ellwood Field Emergency
16 Action Plan (EAP) (Venoco 1998), and the South Ellwood Field Oil Spill Contingency
17 Plan (OSCP) (Venoco 2005a). The primary objectives of the Applicant's Emergency
18 Management System are to:

- 19 • Maximize personnel safety, protection of the environment, and minimize property
20 damage;
- 21 • Mobilize resources to control and contain the incident with rapid, responsible,
22 and effective actions;
- 23 • Manage information efficiently for tactical decisions and strategic planning; and
- 24 • Maintain a positive relationship with governmental agencies, the media, and the
25 public.

26 The Applicant is a participant in the Santa Barbara County Community Awareness and
27 Emergency Response (CAER) organization as part of the Area Oil and Gas Emergency
28 Plan (Venoco 1998).

29 The Applicant took ownership of the South Ellwood Field operations in 1997. As a result
30 of several unauthorized gas releases in 1998 and 1999 the SBCAPCD issued the
31 Applicant an abatement order in April 1999, which, among other things, required a

comprehensive safety audit of the South Ellwood Field facilities. The safety audit was conducted jointly by the Systems Safety and Reliability Review Committee (SSRRC) and staff of the CSLC in 1999 and 2000 (Santa Barbara County 2002).

Initial Incident Response Team (IIRT)

In the event of an emergency incident, the IIRT will be activated immediately and will provide the Applicant's initial response. The IIRT consists of all facility personnel onsite at the time of an incident, and all other facility personnel who may be available for immediate return (Venoco 2003).

The IIRT Incident Commander works with local agency emergency response organizations' Incident Commanders within a Unified Command structure. The Unified Command formulates tactical and strategic decisions to ensure efficient and effective response to the emergency. Depending on the size and complexity of the incident, the IIRT Incident Commander may expand the response organization to include members of the SIRT as necessary.

Sustained Incident Response Team (SIRT)

The Applicant's SIRT is designed and organized to respond to a major onsite incident, or major incident with onsite and offsite consequences. The SIRT is designed to augment and/or expand the capabilities of the IIRT as needed. The degree to which the SIRT is activated is dependent on the nature and size of the incident. A SIRT Command Post is normally designated as the Clean Seas Support Yard in Carpinteria, California (Venoco 1998).

The SIRT is organized into five functional sections: Command, Operations, Planning, Logistics, and Finance. When activated by the SIRT Incident Commander, representatives from the five functional sections of the SIRT will respond to the Command Post within 12 hours of the onset of the event. Emergency response contractors and Oil Spill Response Organizations will respond in accordance with Federal and State requirements and the Applicant's emergency response plans (Venoco 1998, 2005a).

Fire Prevention and Preparedness Plan

The Applicant's South Ellwood Facilities' Fire Prevention and Preparedness Plan (Venoco 2003) defines measures that are to be implemented and maintained by the Applicant's personnel in the event of a fire. The plan contains operational information

1 for all Applicant facilities in the South Ellwood Field, including safety and fire prevention,
2 detection, and protection systems. This plan is designed to be implemented in
3 conjunction with the South Ellwood Field EAP and OSCP, Emergency Evacuation
4 Plans, and H₂S Contingency Plans.

5 If a fire is detected by the Applicant's personnel, contract personnel, or by the public,
6 the IIRT shall be activated as described in the South Ellwood Field EAP. The SBCFD
7 shall be notified via a "911" telephone call and other required government agencies, and
8 Venoco management shall be notified as required by the EAP (Venoco 2003).

9 The SBCFD and OES, in addition to other agencies, conduct an annual inspection of
10 the Applicant's South Ellwood Field facilities under the guidance of the Safety
11 Inspection, Maintenance, and Quality Assurance Program (SIMQAP). Results of the
12 audits are discussed under the Hazards and Hazardous Materials Section, Section 4.2.
13 The last SIMQAP was conducted on the EOF and EMT in 2007. The 2007 SIMQAP
14 generated 49 audit items, all of them low priority or housekeeping items.

15 Oil Spill Response

16 For all project facilities, in case of a spill in the water near a facility, the response actions
17 are designed to limit the spread of oil by surrounding all, or a portion of the slick, so that
18 the oil can be recovered by mechanical means. In the event of a spill, prompt
19 deployment of containment boom (i.e., a response time of 30 minutes) as close to the
20 source as possible is important to slow the spread of the oil while awaiting arrival of
21 additional response resources. If the oil contains high levels of volatile or toxic
22 substances (e.g., H₂S), the slick would be allowed to drift away from the facility before
23 attempting containment. In the event of a spill, absorbent pads and boom would be
24 used to absorb the spill.

25 Platform Holly

26 Platform Holly has a fire protection system designed to prevent, detect and fight fires on
27 the platform. The fire and emergency response equipment located on the platform is
28 summarized in Table 4.8-2. Onsite response techniques are built upon the equipment
29 and manpower resources on the platform and its attendant crew boat. Clean Seas is
30 the Applicant's primary response contractor in the event of an oil spill from the platform,
31 and can respond in approximately one hour with the FRSB *Clean Sweep* and OSRV *Mr.*
32 *Clean*.

Ellwood Onshore Facility

For fire protection, the EOF has a fire water storage capacity of 6,000 barrels or 252,000 gallons (954 m³) in two tanks of 3,000 barrels each. The primary fire water pump has a 200-hp electric driver, and the back-up fire water pump is powered by a 292-hp diesel engine. A lake at the Sandpiper Golf Course provides a back up water source for fire fighting purposes via an existing pipeline. The EOF is accessible to fire equipment via two entrances and paved access roads throughout the facility. Response equipment is stored in two trailers at the EOF.

The facility has design and operation measures that reduce or mitigate the potential for upset conditions and releases, such as pressure detectors and leak monitors, on all piping, LEL monitors, and corrosion coupons on piping. Any visual damage or operational alarms for low pressure/combustible gases result in immediate repairs; shutdown can be effected immediately (also see the capabilities listed in Table 4.8-2).

Ellwood Marine Terminal

The EMT is an unmanned facility that is inspected twice daily and twice nightly. Tank levels are monitored electronically from the EOF control room. During barge-loading operations, there is one person at the EMT, six people on the Barge *Jovalan*, three people on the tug, two people on the assist vessel, and one person on the emergency response vessel, *The Penguin* (Grieg 2005).

Numerous portable fire extinguishers are stationed at strategic locations in the EMT. A wheeled, 150-pound (68 kg) Ansul Purple K fire extinguisher is located outside the shipping pump building and lease automatic custody transfer (LACT) unit. Hand-held 30-pound (13.6 kg) Ansul Purple K fire extinguishers are located by each of the stairs leading to the crude oil tanks, outside the shipping pump building, and inside the control room. There is one CO₂ fire extinguisher inside the control room for use against potential electrical fires (Venoco 2003).

There are two lower explosion level (LEL) detectors located in the EMT pump house that will actuate a local audible alarm. There is also one ultra-violet (UV) detector located in the pump house, which will shut down the pumps if a fire occurs.

The facility has a 10,000 bbl (1,590 m³) firewater tank. Fire water is supplied to the tank via a two-inch diameter (0.05 m) Goleta Water District line.

1 EMT Fire Suppression System Upgrade

2 The safety audit of the EMT that took place after the Applicant took ownership of the
3 South Ellwood Field facilities, also required an evaluation of the facility's fire protection
4 systems and inspection of facility equipment. As a result of the fire protection
5 evaluation, improvements to the Applicant's fire detection and suppression system, and
6 repairs to the firewater tank were recommended by the SBCFD and included as
7 requirements in the findings for the SSRRC/CSLC comprehensive safety audit (Santa
8 Barbara County 2002).

9 The improvements involved the addition of minor structural components to the existing
10 EMT facilities. These provide the means for sustained fire fighting, using a foam/water
11 mix in the event of a fire in either, or both, crude-oil storage tanks. Major project
12 components included (Santa Barbara County 2002):

- 13 • Installation of fire-detection alarms and wiring around perimeters of crude oil
14 storage tanks;
- 15 • Installation of an asphalt concrete pad and driveway loop for fire engine access
16 to fire water tank;
- 17 • Modification of the existing fire water tank manifold;
- 18 • Repair or replacement of the upper sections of the fire water tank;
- 19 • Replacement of a leaking segment of the fire water tank fill piping;
- 20 • Installation of an onsite foam trailer (seven foot by ten foot with a 1,200-gallon
21 foam concentrate storage tank); and
- 22 • Installation of foam/water injectors on both crude storage tanks and associated
23 piping and electrical components.

24 **Water Utility**

25 The Goleta Water District (GWD) is the water purveyor for the city of Goleta. Fresh
26 water for the EOF is purchased from the GWD. Average monthly consumption at the
27 EOF during recent years has been approximately 0.92 acre-ft (300,000 gallons).

The GWD currently has four sources of water: surface water from the Lake Cachuma Project; surface water from the State Water Project; ground water from the Goleta basin; and recycled water. These sources delivered an estimated 15,300 acre feet per year (AFY) to the GWD in 2005, and together are expected to be able to provide approximately 17,670 AFY to the GWD through the year 2030 (Goleta Water District 2005). The Lake Cachuma Project provides approximately 9,320 AFY, the State Water Project provides approximately 4,500 AFY, ground water sources provide approximately 2,350 AFY, and recycled water facilities provide up to 1,500 AFY. The GWD rights to ground water were adjudicated in a lawsuit that was filed in 1973, *Wright v. Goleta Water District*, and finally settled in 1989. "The Wright Judgment" stipulated a safe ground water yield from the ground water basin of 3,410 AFY and gave the GWD rights to 2,350 of that amount, based on a ten-year average.

Fresh water is provided to Platform Holly from a water well which is located a short distance away from the Ellwood pier. Water is loaded into portable water "tote" tanks on an as-needed basis and transported to the Platform during regularly scheduled crewboat runs. Present water consumption averages 220,000 gallons (832 m³) per month.

Sewer Utility

The Goleta West Sanitary District (GWSD) provides sewer service in the Project area. Sewage travels along gravity fed collection sewers to a main trunk line. The trunk line terminates at the GWSD pump house, at which point the waste is transferred via a pressurized line extending parallel to the Santa Barbara Airport, to the Goleta Sanitary District's (GSD) treatment plant located on William Moffet Place next to the Santa Barbara Municipal Airport. Treatment of wastewater collected by GWSD is provided through a contract with the Goleta Sanitary District (GSD). The GSD treatment plant has a capacity of 9.7 million gallons per day (based on average daily flow), but is currently limited to 7.64 million gallons per day under a National Pollutant discharge Elimination System (NPDES) permit issued by the US environmental Protection Agency with concurrence from the Central Coast Regional Water Quality Control Board. Disposal of treated effluent is by ocean outfall, offshore from Goleta Beach under its agreement with GSD. GWSD is allocated 40.78 percent of the capacity at the sewage treatment plant, which equates to about 3.12 million gallons per day. GWSD currently generates approximately 1.71 mgd of sewage that is treated at the GSD plant, resulting in about 1.41 mgd of remaining capacity in the GWSD's existing system.

1 The EOF is not connected to the Goleta sewer service. Sewage generated at the EOF
2 is routed to the onsite septic tank, which is emptied by a contract sanitary disposal
3 company approximately once per month.

4 Produced water generated at the EOF in the course of oil processing is injected into the
5 onsite disposal well. Up to 11,000 bbl (1,750 m³) of treated produced water per day
6 (bpd) can be disposed of by injection. Historically, close to 8,600 bpd of water is
7 injected.

8 **Solid Waste Handling Facilities**

9 The amount of non-hazardous solid waste disposed of in Santa Barbara county is
10 approximately 250,000 tons per year (UCSB 2003). The Santa Barbara County Public
11 Works Department owns and operates the Tajiguas Landfill, the Santa Ynez Valley
12 Recycling and Transfer Station, the South Coast Recycling and Transfer Station, the
13 New Cuyama Transfer Station, and the Ventucopa Transfer Station. The Department
14 operates three collection services: one for the South Coast, one for the Lompoc
15 unincorporated area, and one for the Santa Ynez and Santa Maria Valley
16 unincorporated areas. The management of solid waste by the Department includes
17 collection, recycling, disposal, and mitigation for illegal dumping. Within the city,
18 collection services are provided by Marborg Industries and BFI Waste Systems.

19 Waste generated in the city is handled at the South Coast Recycling and Transfer
20 Station, where recyclable and organic materials are sorted out. The remaining solid
21 waste is disposed of at the Tajiguas Landfill. The 80-acre Tajiguas Landfill, located
22 26 miles west of Santa Barbara, has a permitted capacity of 23.3 million cubic yards
23 and is permitted to operate through 2020. The South Coast recycling and transfer
24 Station processes 550 tons of waste per day.

25 Table 2.4 (see Section 2.0, Project Description) presents a listing of wastes that are
26 generated at the EOF and include produced water, sewage, sludge, untreatable oil, and
27 general refuse. General refuse is hauled away periodically and disposed of by a local
28 contract sanitation company.

29 Wastes generated at Platform Holly are shown in Table 2.2 (see Section 2.0, Project
30 Description) for both hazardous and non-hazardous wastes. These wastes are
31 containerized and transported to shore for ultimate disposal at an approved disposal
32 site.

Platform Holly generates waste drill muds from well maintenance and workover operations. The well workover fluids and well cuttings/waste are either injected into a Class II injection well on Platform Holly, or hauled to an approved onshore disposal site (Venoco 2005b).

4.8.2 Regulatory Setting

Fire protection systems associated with the Project must be detailed in the fire protection plan and include systems and designs that ensure compliance with a range of codes and standards.

Federal

There are no applicable Federal regulations pertaining to utilities such as solid waste, wastewater treatment and water.

Federal regulations directly applicable to fire protection and emergency response issues include:

- Title 29, Labor, of the Code of Federal Regulations (CFR) 1910.38, Emergency Action Plans;
- 29 CFR 1910.39, Fire Prevention Plans; and
- 29 CFR 1910.155, Subpart L, Fire Protection.

State

The California State Fire Marshal has responsibility for the safety of all intrastate hazardous liquid pipelines and all interstate pipelines used for the transportation of hazardous or highly volatile liquid substances. The State Fire Marshal develops regulations relating to fire and life safety under Title 19, Public Safety, of the California Code of Regulations (CCR). These regulations have been prepared and adopted for the purpose of establishing minimum standards for the prevention of fire and for the protection of life and property against fire, explosion, and panic. The State Fire Marshal also adopts and administers the regulations and standards considered necessary under the California Health and Safety Code to protect life and property, including section 13160, Portable Fire Extinguishers, and section 13195, Automatic Fire Extinguishers Systems (California Office of the State Fire Marshal 2005).

1 Division 2 of the Government Code of the State of California (referred to as the
2 Subdivision Map Act, Government Code Section 66410 *et seq.*) sets forth general
3 provisions, procedures, and requirements for the division of land, including the provision
4 of public services.

5 **Local**

6 Santa Barbara county has a number of requirements governing fire protection and
7 emergency response at facilities.

- 8 • Santa Barbara County Code Chapter 15, Amendments to the Uniform Fire Code;
- 9 • SBCFD Standard 2A, Fire Protection Water Regulations Flows and Hydrant
10 Spacing;
- 11 • SBCFD Standard 3, Fire Protection Hazard Area Requirements;
- 12 • SBCFD Standard 6, Hazardous Materials Conditions;
- 13 • SBCFD Standard 7, Alarms & Signaling Systems;
- 14 • SBCFD, Evacuation Near Flammable or Combustible Pipeline;
- 15 • Santa Barbara County Permit Conditions, Various;
- 16 • Santa Barbara County Public Works Engineering Design Standards, Roadways;
- 17 • Santa Barbara County Ordinance 2919 [95-DP-024] (Venoco, Inc.'s Operating
18 Permit for the EOF and the EMT); and
- 19 • City of Goleta GP/CLUP, Policy 8.3 requires annual safety audits of all new and
20 existing oil and gas production, processing, and storage facilities. The city, or its
21 agent, shall participate in these safety audits. All deficiencies noted in each audit
22 shall be addressed promptly, in timeframes as recommended by the audit's
23 conclusions.

24 The county's Source Reduction and Recycling Element (SRRE) is mandated by the
25 California Integrated Waste Management Act of 1989, which requires city and county
26 governments to be responsible for planning and monitoring solid waste management
27 and recycling efforts. The goal of the SRRE is to reduce the amount of solid waste

entering landfills, by implementing, in order of priority; source reduction, recycling and composting, and environmental transformation (incineration, pyrolysis, or biological conversion). The final option is land disposal of waste. The justification for requiring such recycling programs is based on the environmental impacts associated with landfill operation, expansion, relocation, and closure, in addition to impacts caused by raw material production.

Other Recognized Codes and Standards

Other codes and standards are specified by the American National Standards Institute (ANSI), American Petroleum Institute (API), Industrial Risk Insurers (IRI), National Fire Protection Association (NFPA), and Uniform Fire Code (UFC). These codes and standards are listed in Table 4.8-3 below.

4.8.3 Significance Criteria

Fire Protection and Emergency Response. The proposed Project would result in a significant impact if:

- Continued operation of the Project creates the need for one or more additional employees to maintain the current level of fire protection and emergency response services;
- The Project results in the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain the current level of fire protection and emergency response services;
- The Project is located more than 10 miles (16 km) or 15 minutes from an emergency response location with fire fighting and spill response capabilities;
- Accessibility to the Project site is difficult or limited; or
- The Project does not have an approved fire protection or emergency response plan.

Water. The City of Goleta Environmental Thresholds and Guidelines Manual includes thresholds pertaining to groundwater supply for projects involving groundwater wells. The proposed Project does not involve groundwater wells and, therefore, these

- 1 thresholds are not applicable. Based on Appendix G of the State CEQA Guidelines, the
 2 proposed Project would result in the potential for a significant impact if it requires new or
 3 expanded water supply entitlements.

Table 4.8-3
Applicable Standards and Codes

Code/Standard	Description
ANSI B31.4	Liquid Petroleum Transportation Piping Systems
API RP 500	Classification of Hazardous Areas in Petroleum Pipeline Facilities
API Pub 2004	Inspection for Fire Protection
IRI IM.2.5.2	Plant Layout and Spacing for Oil and Chemical Plants
IRI IM 17.3.3	Guiding Principles For Loss Prevention and Protection of Crude Oil and Petroleum Products Pumping Stations
IRI IM 17.3.4	Guiding Principles For Loss Prevention and Protection of Crude Oil and Petroleum Products Storage Terminals
NFPA 11	Low Expansion Foam and Combined Agent Systems
NFPA 12	A&B Halogenated Extinguishing Agent Systems
NFPA 15	Water Spray Fixed Systems
NFPA 20	Centrifugal Fire Pumps
NFPA 22	Water Tanks for Private Fire Protection
NFPA 24	Installation of Private Fire Service Mains and Their Appurtenances
NFPA 25	Inspection, Testing and Maintenance of Water-Based Fire Protection Systems
NFPA 30	Flammable and Combustible Liquids Code
NFPA 70	National Electric Code
UFC Article 02, Division II	Special Procedures
UFC Article 04	Permitting
UFC Article 09	Definitions and Abbreviations
UFC Article 10	Fire Protection
UFC Article 11	General Precautions Against Fire
UFC Article 12	Maintenance of Exits and Occupant Load Control
UFC Article 13	Smoking
UFC Article 14	Fire Alarm Systems
UFC Article 49	Welding and Cutting
UFC Article 79	Flammable and Combustible Liquids
UFC Article 80	Hazardous Materials
UFC Article 85	Electrical Systems

- 4
- 5 **Wastewater Treatment.** The proposed Project would result in a significant impact if it
 6 would:

- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; or
- Result in a determination by the wastewater treatment provider, which serves or may serve the Project, that it does not have adequate capacity to serve the Project's projected demand in addition to the provider's existing service commitments.

Solid Waste. The proposed Project would result in a significant impact on the county's landfill capacity if it generates more than 196 tons of solid waste per year (five percent of the average annual increase accounted for in the county's Source Reduction and Recycling Element), after a 50 percent reduction credit is given due to recycling efforts. This impact would be considered significant on a project and cumulative level.

4.8.4 Impact Analysis And Mitigation

Impact PS-1: Fire Protection and Emergency Response Impacts

The proposed Project could potentially result in increased demands for fire protection and emergency response due to the proposed drilling, higher oil and gas throughput, higher LPG/NGL production, and more equipment at the EOF in an area which is currently under-serviced, contributing to the need for a new fire station in Goleta (Significant, Class I).

Impact Discussion

As discussed above, the EOF, Platform Holly, and EMT must meet a number of Federal, State, and local requirements relating to fire protection and emergency response. The SBCFD and OES, in addition to other agencies, conducts an annual operational and safety inspection of the Project facilities. As a result of a recent inspection at the EMT, the EMT's fire suppression system has been upgraded to meet current standards. The Applicant's Fire Prevention and Preparedness Plan, OSCP and EAP have been reviewed and deemed adequate by the regulating agencies.

The proposed Project (EOF) is located approximately 2.7 miles (4.3 km) from Station 11. As part of the proposed project, there would be new equipment installed at the EOF. In addition, Platform Holly would engage in drilling of 40 wells beyond the workover drilling that is currently occurring at the platform. As a result of drilling of the

new wells, higher oil and gas throughputs through the EOF and the Project pipelines would be expected.

As shown in Section 4.2, Hazards and Hazardous Materials, higher risks of upset would result from the Project, primarily due to increased LPG truck loading operations. Consequently, higher demand for fire protection and emergency response is likely to occur. The SBCFD has determined that the area where the project is located is the most underserved area in Goleta due to both response times and the population to firefighter ratio. Potential incidents related to the facility, plus annual inspections, emergency response and planning activities associated with the proposed Project would incrementally add to the demand for fire protection services. Currently there does not appear to be a mechanism, such as an impact development fee, that would hold the Applicant responsible for its portion of this service demand increase. Therefore, impacts from the proposed Project on publicly provided fire protection and emergency response services would be considered significant.

Mitigation Measures

PS-1a. Impact Development Fee. The Applicant shall provide an impact development fee payment to the Santa Barbara County Fire Department that would be directed toward the eventual construction of a new fire station. Appropriate fees shall be determined by the city of Goleta and the Santa Barbara County Fire Department based on fair share fee analysis in conjunction with other city projects that will contribute to the acquisition of property for, and the construction of, the future fire station.

Rationale for Mitigation

As discussed in Section 4.2, the proposed Project would have Class I impacts that would likely require increased emergency response in an area already underserved. In addition, no mechanism currently exists for the Applicant to mitigate for its incremental need of fire protection and emergency services within this currently underserved area. Other development projects in the community pay impact development fees that go towards the city's fund to build a new fire station. These fees are based on the type of development; therefore, the Applicant could help mitigate its incremental impact on publicly provided fire protection and emergency services by paying a similar fee.

1 *Residual Impact*

2 Inclusion of this requirement would increase the likelihood that fire protection services
3 are improved in this area, but because there is no certainty that an added Fire Station
4 would be built impacts would remain significant (Class I).

5 **Impact PS-2: Impacts on Water Utility**

6 **The proposed Project could result in increased demands for water due to**
7 **construction, drilling and higher oil and gas throughput (Less than Significant,**
8 **Class III).**

9 *Impact Discussion*

10 Construction of the new Project facilities and the pipeline, and abandonment of the EMT
11 facilities would result in demand for water for activities such as watering bare soils, dust
12 control, use by work crews, washing down equipment, cleaning for the vessels that
13 would be removed as per the Project, landscaping and revegetation.

14 The potable water requirements for the abandonment portion of the Project are
15 estimated to be 300,000 gallons (150,000 gallons for pipeline and tank flushing,
16 150,000 gallons for dust control). The Water for flushing would be recovered and
17 disposed of offsite.

18 Water would also be required for revegetation of the EMT site. The actual water
19 quantity would be based on factors such as the season, the specific revegetation plan,
20 and its success, and weather. Applicant-estimated maximum monthly volume of water
21 for revegetation-related irrigation would be 90,024 gallons, and would not exceed the
22 maximum historic water consumption from the GWD at the existing EMT meter (e.g.,
23 265,540 gallons in December 1995) (Venoco 2005b).

24 The water demand created by such activities would be minor compared to overall water
25 demand in the area, and temporary in nature, therefore impact from construction
26 activities to water supply is less than significant.

27 The new facilities would not require additional fresh water use. Water based drill muds
28 would be prepared using ocean water (Grieg, 2007).

29 The Project also would not contribute to groundwater overdraft, as no new water wells
30 are proposed.

1 **Impact PS-3: Impacts on Sewer**

2 **The proposed Project could result in increased discharge into the public sewer**
3 **due to drilling and higher oil and gas throughput (Less than Significant, Class III).**

4 *Impact Discussion*

5 The Project would be generating more produced water due to the additional production
6 of oil/water emulsion from the proposed wells. However, the produced water would be
7 injected into authorized disposal wells, and would not be affecting the public sewer.
8 There would be no increase in the employment at the Project facilities, and thus sanitary
9 sewer use would not increase. There would be some additional personnel at the EOF
10 due to construction of the new facilities at the EOF, but it would be a temporary activity,
11 resulting in short term, small sanitary sewer use increase. Therefore, the proposed
12 Project's impacts related to sewer services would be considered less than significant.

13 **Impact PS-4: Impacts to Solid Waste Facilities**

14 **The proposed Project could result in increased demands for waste handling**
15 **capacities due to drilling and higher oil and gas throughput (Less than**
16 **Significant, Class III).**

17 *Impact Discussion*

18 Only minor changes in chemical use and wastes are expected with the proposed
19 Project. The hazardous wastes would not be deposited in county landfills and therefore,
20 the SBC threshold does not apply to these wastes. Hazardous wastes would be
21 transported and disposed of at the special facilities outside of Santa Barbara county.
22 These facilities have been designed and permitted to handle such wastes. Currently,
23 there is sufficient capacity at these facilities to handle the wastes that could be
24 potentially generated by the proposed Project. Thus, there would be less than
25 significant impacts to solid waste handling facilities.

26 Drilling muds would be cleaned and recycled during drilling as much as feasible. After
27 recycling is no longer feasible, waste drilling muds and well cuttings/waste would be
28 either injected into a Class II injection well on Platform Holly, or hauled to an approved
29 onshore disposal site. Because the muds will be recycled during drilling, the amount of
30 waste muds will not be significant.

Impact PS-5: Impacts to Solid Waste Facilities due to Demolition

The proposed Project could result in increased demands for waste handling capacities due to demolition and removal of equipment from the Project facilities (Potentially Significant).

In conjunction with any abandonment and removal of the existing facilities, any hazardous chemicals and sulfur present in the system to be modified would be removed. Disposition of the materials removed would depend upon whether or not the materials may be beneficially recycled. Per the Applicant, as materials are removed, they would be tested and be subjected to waste characterization in accordance with California and Federal hazardous waste laws.

The amount of materials that would be removed from the EMT is estimated to fit onto 145 trucks.

Mitigation Measures

To further reduce impact to landfills from the demolition activities proposed in the Project, the following mitigation measure is proposed.

PS-5a. Recycling of Removed Materials. The Applicant shall apply to Santa Barbara county for a Demolition and Reclamation Permit. All materials to be removed from the Project facilities due to the proposed equipment changes at the Ellwood Onshore Facility and Ellwood Marine Terminal decommissioning, shall be inspected for the purpose of recycling or reusing. All materials deemed to be recyclable, shall be recycled or reused to the maximum extent feasible and consistent with a Recycling Plan as approved by Santa Barbara County.

Rationale for Mitigation

The landfills in the region are approaching capacity at an increased rate. Recycling and reusing of materials that could, otherwise be sent to a landfill would prevent those materials from going to a landfill.

Residual Impacts

Information regarding this potential impact is being provided for information purposes only, since a complete application for abandonment and reclamation of the EMT site

has not been submitted to Santa Barbara County. In accordance with the County of Santa Barbara Land Use and Development Code, Section 35.56, the Applicant would need to obtain a Development and Reclamation permit, which addresses the removal of above ground infrastructure, remediation of contamination, and restoration of the site. This permit would require listing the locations of all equipment to be removed and equipment that would remain, both above ground and underground, and the type and extent of all contamination and proposed remedial actions to the level of detail that can be evaluated through environmental review.

Table 4.8-3
Summary of Public Services Impacts and Mitigation Measures

Impact	Impact Class	Mitigation Measures
PS-1: Fire Protection and Emergency Response Impacts	Class I	PS-1a: Impact Development Fee
PS-2: Impacts on Water Utility	Class III	None required.
PS-3: Impacts on Sewer	Class III	None required.
PS-4: Impacts to Solid Waste Facilities	Class III	None required.
PS-5: Impacts to Solid Waste Facilities due to Demolition	Not Classified	PS-5a: Recycling of removed materials.

Extension of Life Impact

The Applicant has stated that the proposed Project would not increase the life of the existing South Ellwood Field Facilities, which is currently defined by the operational life of Platform Holly until 2040, and would likely reduce the overall duration of oil and gas production from existing facilities due to more efficient extraction of the resource. However, it is possible that increased oil and gas production from new wells drilled into the existing and proposed leases, formations (Lower Sespe) and fault blocks (North Flank and Eagle Canyon) could produce economically viable resources for a longer-than-expected period and increase the life of the existing facilities. Therefore, the impacts identified in Table 4.8-3 have the potential to occur over a longer period than assumed for the proposed project, exacerbating potentially adverse impacts.

Increasing the project duration and exposure of facilities to potential hazards could result in an increased likelihood of an oil spill or other facility upset, placing additional demands on public services which would be considered significant (Class I).

4.8.5 Impacts Of Alternatives

No Project Alternative

Under the No Project Alternative, the Applicant's lease extension would not be approved, there would be no modifications to the EOF, the pipeline would not be installed and the EMT would continue operations.

Currently, lease agreements for the operations of the EMT are set to expire in 2013 and/or 2016 (see Section 2.0, Project Description). It is assumed that, under the No Project Alternative, after the lease expirations, the Applicant would pursue alternative means of crude oil transport such as pipeline or truck transportation. The impacts of these transportation modes are described in the Venoco Ellwood EMT Lease Renewal Project Draft EIR (CSLC 2007). Any future crude oil transportation options would be subject to appropriate agency review and approval.

Any future crude oil transportation option would be the subject of a subsequent application to the CSLC, city of Goleta, or Santa Barbara county, depending on the proposed option. As a result, impacts to publicly provided fire protection and emergency response services would occur as with the existing operations, until the EMT facilities are terminated.

No EOF Modifications

There would be no new impacts with this alternative.

Processing on Platform Holly

This option would reduce the risk of fire or explosion at the EOF and eliminate the transportation of LPG on area roadways. As discussed in Section 4.2, Hazards and Hazardous Materials, the risk from truck accidents would decrease. Impacts would be less than the proposed project and would not be expected to negatively affect publicly provided fire protection and emergency response services. Impact **PS-5**, impacts to Solid Waste Facilities due to demolition would also occur as part of this alternative.

1 **Las Flores Canyon Processing: Offshore Gas and Onshore Oil Pipeline**

2 As described in Section 4.2, Hazards and Hazardous Materials, this alternative would
3 result in lowered risks of fire and explosion at the EOF location. Therefore, no impact to
4 publicly provided fire protection and emergency response services would be expected.

5 There would be no impacts on utilities, the same as for the proposed Project. Impact
6 **PS-5**, impacts to Solid Waste Facilities due to demolition would also occur as part of
7 this alternative.

8 **Las Flores Canyon Processing: Offshore Gas and Offshore Oil Pipeline**

9 As described in Section 4.2, Hazards and Hazardous Materials, this alternative would
10 result in lowered risks of fire and explosion at the EOF location. Therefore, no impact to
11 publicly provided fire protection and emergency response services would be expected.

12 There would be no impacts on utilities, the same as for the proposed Project. Impact
13 **PS-5**, impacts to Solid Waste Facilities due to demolition would also occur as part of
14 this alternative.

15 **4.8.6 Cumulative Projects Impact Analysis**

16 The effect of increased, industrial, residential and commercial development in the
17 Project area has cumulatively affected the SBCFD. Currently the maximum acceptable
18 ratio of firefighter-to-population is exceeded in the Goleta area. As other projects are
19 developed in the area, the firefighters-to-population ratio will continue to decline. The
20 proposed Project would add incrementally to the demand for publicly provided fire
21 protection and emergency response services in this under-serviced area. As an
22 example, PRC 421 production would exacerbate the demand on firefighter response in
23 the event of an emergency. Therefore, the proposed Project would cause a significant
24 cumulative impact to publicly provided fire protection and emergency services.

25 The Project will not increase demand for water or sewer services, or police protection,
26 because there will be no increase in employment, and no increase in the process needs
27 for water. Thus, the Project does not contribute to the cumulative impacts on utilities.